

#4

PATENT
Attorney Docket No. 400782

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

OKAMOTO et al.

Group Art Unit: Unknown

Serial No.: Unassigned

Examiner: Unassigned

Filed: July 21, 2000

For: IRREGULAR PATTERN
READER



INFORMATION DISCLOSURE STATEMENT

Assistant Commissioner for Patents
Washington, D.C. 20231

Dear Sir:

Pursuant to the requirements of 37 CFR §§1.56 and 1.97, the attention of the Examiner is directed to the documents listed on the attached Form PTO-1449. A copy of each of the listed documents is enclosed. Neither this Statement nor the listing of these documents on Form PTO-1449 is an admission that these documents are prior art as to Applicants nor a representation that a search has been made or that no more pertinent documents exist.

Japanese Laid-Open Publication No. Hei 7-98753 describes a fingerprint input device comprising a prism with the boundary between the prism and air as a detection surface, a light source, and a projection lens group for directing illuminating light to be incident on the detection surface at an angle smaller than a critical angle from a normal to

In re Appln. of Okamoto et al.
Serial No. Unassigned

the detection surface from the inside of the prism. An image forming lens group and an image detecting element are located in a position for detecting only a light beam returned to the prism at a larger angle than the critical angle from the normal to the detection surface at each point of the detection surface, and reads a pattern of a fingertip close to the detection surface, as an image.

Japanese Laid-Open Publication No. Sho 61-255482 describes a ruggedness detector easily detecting a rugged pattern using a transparent body having a light incident plane on which light from a light source is incident, and having a light reflecting plane close to the shape of a body to be detected, to improve close contact of the body.

Japanese Examined Utility Model Publication No. Sho 52-23018 describes an optically matched filtering device to improve the detection reliability of a fingerprint pattern.

Japanese Laid-Open Publication No. Hei 6-83944 describes an uneven shape detecting device comprising a photoconductor having a plane abutting an uneven body, an illumination light incidence surface which crosses the plane at an angle, a reflecting surface which reflects light generated when illumination light incident on the incidence surface irradiates the body almost parallel to the body abutting plane, and a condenser lens for condensing light reflected by the reflecting surface, a mirror which reflects light from the lens almost at a right angle to the body abutting plane, and an image pickup system on which the reflected light from the mirror is incident.

Japanese Laid-Open Publication No. Hei 3-246693 describes an input device for fingerprint information to obtain one-dimensional fingerprint information without

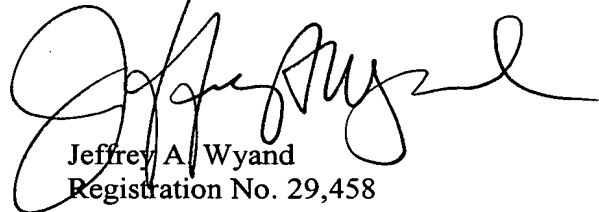
In re Appln. of Okamoto et al.
Serial No. Unassigned

complicated signal processing, by converging light reflected from a transparent surface on which a finger is impressed and detecting the converged light with an optical sensor.

Applicants respectfully request that the enclosed documents be considered by the Examiner and made of record in the referenced patent application.

Respectfully submitted,

LEYDIG, VOIT & MAYER



Jeffrey A. Wyand
Registration No. 29,458

Suite 300
700 Thirteenth Street, N.W.
Washington, D.C. 20005
Telephone: (202) 737-6770
Facsimile: (202) 737-6776
Date: July 21, 2000
JAW:ves